

At the Tunnel's End

By Ray Stannard Baker

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THERE was a curious diversity of opinion about tunnel No. 3. Barclay, the contractor, who had a little shanty of an office at the top of the shaft, with blue print plans on the walls and a stove-pipe crooking out of one corner of the roof, said it was a beautiful tunnel. He said it with cheerful confidence to the committee of five who had come to investigate. The five had just dined expansively (with Barclay), and it was with good humored bravado that they now trusted themselves to the dinky elevator and descended the shaft. Sixty feet below daylight they stepped out on a slimy platform, and Gregson, the underground boss, showed them a moist red tube reaching outward under the river. A row of misty incandescent lights ribbed the tunnel at regular intervals with circles of brightness, and at the far end they could see a black wall with a closed steel door. For the benefit of the chairman of the five, who thought that this wall was the end of the tunnel, Gregson explained that the steel door led into the air lock and that for 600 feet beyond stretched the pressure workings. Gregson confined himself strictly to information; he ventured no opinion at all, as became a wise boss in the presence of the contractor. The five walked down the plank roadway on the floor of the red tube, their heads almost touching the roof, the water dripping on their oil coats, their ears filled with the strange echoes of this underground place.

"You are now under the river," Barclay said; "the water is not twenty-five feet over your heads."

The five looked at one another.

"Is there any danger?" asked the chairman.

"Not the slightest," answered Barclay.

A small, cold rivulet dripped down inside the chairman's collar.

"Let us go up," he said.

Having now nearly reached the steel door of the air lock, Barclay invited them to enter the pressure workings, where twenty men and a mule were toiling, but the chairman remembered suddenly that he had a weak heart and couldn't take air pressure, and the others were certain that, having just dined heartily, it would be very dangerous for them to venture. Barclay looked relieved at this decision; Gregson's face was grim, and he said nothing.

So the five went up with the hazy impression that tunnels were generally moist and uncomfortable, if not dangerous, and that Mr. Barclay was a remarkably efficient contractor and an accomplished engineer, to say nothing of being a genial good fellow. They reported that the tunnel was a good and perfect tunnel and referred in complimentary terms to the contractor, thereby relieving the fears of a solicitous public.

It is a curious fact that the deeper into a tunnel one penetrates the poorer its reputation. The five had not been permitted to catch so much as a glimpse of Jernigan, the sub-boss, lord of the pressure workings. If Jernigan's opinion of the tunnel had been asked, he would have answered frankly, being an outspoken man:

"She's a thundering geeser."

In the cold ooze at the end of the tunnel, where the truth was, gaunt, half clad men, with picks and clay plugging balls, said things about the tunnel that would not look well in print, and, being men of experience in these things, they spoke with authority. So bad was the reputation of the tunnel among those who knew that no boss but Jernigan could have kept a crew at work where every pick thrust was a special invitation to death by drowning.

When tunnel No. 3 began to grumble it was beautiful to see Jernigan hold his men in hand. At the first sound of danger there were those who would have gone rushing for the air lock and safety, but Jernigan, standing there behind them in the roadway, was more terrible than the danger in front. Of all the sounds known to these underground places there is none quite like the grumbling at a tunnel's end.

And yet, sudden and startling as these sounds at a tunnel's end may be, they are nothing of themselves. Their terror lies in their significance. They are the outcries of danger. The tunnel grumbles when it reaches a spot where the earth between it and the water of the river bottom is thin, where there are pockets of quicksand or deeps of thick mud. Its excuse for grumbling is the best. The heavily compressed air within the tunnel, thus compressed for the main purpose of keeping out water and mud from the tunnel's end, breaks out through the thin earth where the men are working with a ripping wall and goes boiling upward to the surface of the river. And when it escapes the water and thin mud bursts in, and if enough air goes out and enough water comes in, it is ninety-nine chances to one that the workers, racing for the air lock, will be overtaken and drowned with their noses to the roof of the tunnel like rats in a rain barrel.

For 500 feet from the air lock in Jernigan's working there never was a better behaved tunnel. All the way it ran as straight and shiny as a gun barrel.

The men at the end driving their way comfortably through hard sand and clay, with here and there a bowlder, and not a thought of the vessels plying back and forth sixty feet over their heads. Behind came the brickers building the tunnel wall for the brick tube was always kept complete within a few feet of the tunnel's end, the pipemen with their wrenches and the electricians adding light after light to the long row at the tunnel roof. Barclay rubbed his hands with glee, thinking of his profits, and Gregson lay by and let Jernigan do the work. It was tunnel building according to the books.

But one day the Swede, Swanson, driving his pick for a shovelful of sand, brought down a cart load. Where the earth lay bare underneath it glistened with tiny rivulets of water, and presently the sand began to slough down noiselessly, loosening more and more, growing more fluid. All of the men sprang to the end of the plank roadway. An Italian who went by the name of Macaroni—for the sake of uniformity—yelled lustily for Jernigan.

"What you squallin' for?" demanded the sub-boss. "It's only a pocket of quicksand."

Up to that time the air lock had not been used, but now the men rushed from the deep workings, the inner steel door of the lock was clapped shut, and the compressed air was turned in. With a depth of sixty feet it was necessary to use a pressure of over thirty pounds to the square inch (two atmospheres) in order to make the pressure of air within the tunnel equal to the pressure of earth and water without, thereby tending to keep the soft earth at the tunnel's end from caving in.

"Now, byes," said Jernigan, "we'll swallow air."

Twenty men crowded into the lock, and the outer steel door was closed. Jernigan turned a valve, and the air came blowing in, the men held their noses, blew into their cheeks, swallowed lustily with nothing to swallow, that they might equalize the pressure inside their bodies with that without. Terrible sharp pains shot through their heads, and sometimes it seemed as though their eardrums must burst. But at last the limit of pressure was reached, and the pain gradually passed away. The door leading to the pressure workings was opened and in they went.

Jernigan's men were all young and sound. None other can bear the strain and fatigue of this most wearing of toil. The tunnel had grown misty, so that the lights shone through halos of haze, and the compression of the air had generated so much heat that the men began to strip. Jernigan's voice sounded thin and high in the thick air; it was an effort to speak aloud. Paddock, who was an inveterate whistler, could not blow a sound.

"She's stopped slobberin'," remarked Jernigan as they reached the tunnel's end. Most of the men began digging cautiously and shoveling the mud into the tram cars. Swanson, the Swede, sat at one side and industriously made small round balls of clay, a little larger than croquet balls. It seemed like child's work, and Jernigan kept up a steady stream of rally at the expense of the big Swede.

Swanson could have put his big flat thumb on Jernigan and smashed him and done with it, for he was so tall he couldn't stand straight on the roadway of the tunnel without hitting his head—a huge hulk of a man, tow headed, blue eyed, slow of speech, faithful. He called the sub-boss always "Meester Jernigan." Jernigan had at least twenty names for him and not one of them at all complimentary. And yet no dog ever served a master more faithfully than Swanson served the sub-boss.

And suddenly, as they worked, the tunnel began to grumble, and there was Jernigan barring the passageway to safety like a rock.

"Give it to her, byes," he shouted.

Swanson was already on his feet, with his arms full of the clay balls, and he and three of the other men began throwing them swiftly and vigorously at the spot where the air was escaping. Each flattened out near the tunnel rim like a thick corn cake, and when the rattling ceased Swanson sprang into the mud and pommelled the clay into the break. The heavy air in the tunnel helped to hold the patch in place. Then the work went on again, the Italians picking and shoveling; Billy, the tram mule, flapping his long ears; Swanson soberly patting mud pellets, and Jernigan directing everything with cheerful unconcern. Once more during the shift the tunnel grumbled, once more there was a battery of clay balls and once more the men won the victory against the water.

"You're a pretty pitcher, Monty," shouted Jernigan. "Why don't you throw over the home plate? Here, Swanson, you Swede, climb up there and paddle."

At the end of three hours of the heavy air and the heavier work the men returned to the air lock, suffered again the pain of reducing pressure and went into free air, wet and shivering with cold. They were taken instantly to a hot room, where they were given quantities of steaming black coffee, and after that they dropped down to sleep. Two shifts a day, three hours or less each, was all these men could stand.

Thus day after day Jernigan kept his crew burrowing, though the tunnel grumbled its displeasure almost constantly, and the earth came down half fluid silt. So much water came in that it ran in a stream under the plank roadway, and the great pumps at the shaft head worked to full capacity. Once they thought the whole tunnel end was coming in. The water gush ed inward, rose rapidly above the road way and swirled cold about their feet.

Two Italians bolted suddenly from the earth working to escape. Even Paddock dropped his shovel. Jernigan stood like a post.

"Get back there!" he roared.

He caught one Italian with a blow on the chin that sent him sprawling into the water. The second paused, and Jernigan leaped at him and drove him headlong against the earth at the tunnel's end.

Meantime Swanson, in his slow way, was coolly pitching clay balls. Two other men, with Jernigan, joined him, and at last, with the water cold about their ankles, they succeeded in stopping the flow. It was after this incident that the committee of five came to look at the tunnel, for such things as these leak curiously out to the public, and the committee, as I have said, found it a good and perfect tunnel and Mr. Barclay an amiable man. Barclay was no longer congratulating himself. In two weeks the tunnel had not advanced three feet, and it was costing him a small fortune to keep the water down.

And then came the blue Monday. It was at the afternoon shift. The tunnel had been behaving itself with admirable decorum for a day or two, the earth had seemed much harder, and, though there was frequent rattling of escaping air, the sound of which had grown so familiar that it brought not a tremor to the men, the gaps were more easily closed. Swanson had accumulated a large stock of clay balls.

"You're getting fat and lazy, Swanson," Jernigan said. "The old lady ain't playin' her chunes any more."

But Jernigan spoke too soon. Not ten minutes later one of the Italians sprang back with a shout; he had opened a little pocket of silt near the top and at one side of the tunnel's end. For a moment the soft earth gushed out; then there was the wailing sound of escaping air. Instantly Swanson drove a clay ball into the hole, but instead of remaining there it disappeared at once, being driven upward by the escaping air. Other balls followed in like manner; the air was going fast. Half the crew were throwing the clay, but it either went out of sight or ploughed down with the incoming mud. Then, of a sudden, in gushed a torrent of water as big as a man's leg. Jernigan



Swanson was compelled to push against him.

gan rang for more air pressure, and the men redoubled their efforts, but all to no avail. Suddenly, while Jernigan himself was working at the breach, the Italians bolted. Jernigan yelled at them, but they were too desperately frightened and ran at the top of their speed for the air lock. The other men paused undecided for an instant, and then they, too, followed. It seemed certain death to remain with that stream of water pouring into the tunnel. It would require only a moment to wear a larger hole, and then the whole river would be in on them, and there were nearly 600 feet of running to the air lock and safety.

Jernigan looked around. Only Swanson was left, calmly yet swiftly gathering up more clay balls.

For an instant the two men looked at each other. Jernigan had promised to see the work through, and see it through he would, water or no water. Swanson saw him spring suddenly upon the low earth bank which the men used when working around the upper rim of the tunnel. He turned swiftly and braced himself into the mud of the tunnel's end, driving his body into the pocket of quicksand.

"Here, Swanson, plug me in," he ordered.

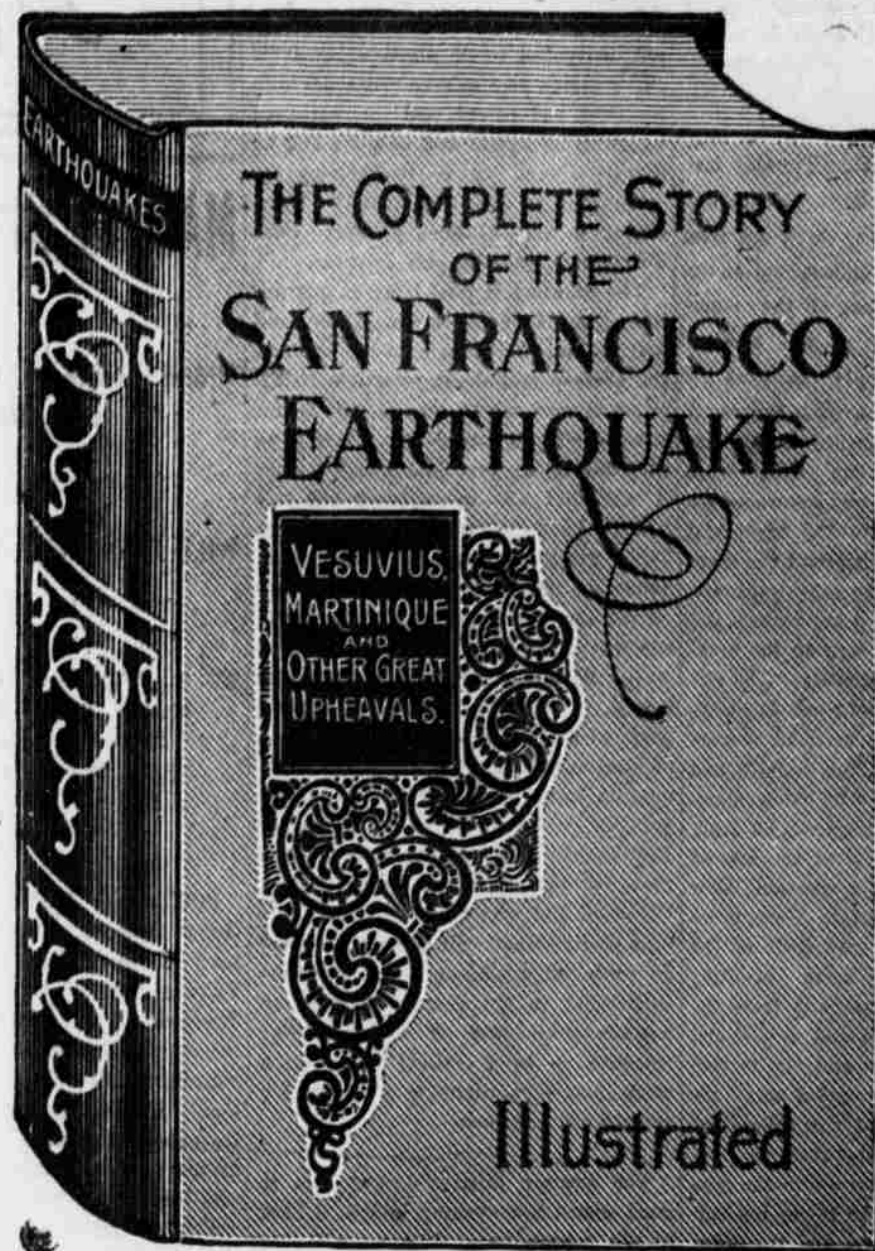
Swanson brought clay balls and drove them into the mud around Jernigan's body. "She's comin' fast, Meester Jernigan," he observed. The water poured out everywhere around him, and when the clay began to stop its course the pressure was so great on Jernigan's back that Swanson was compelled to push against him and hold him in with one of his huge hands while with the other he plugged away with the clay.

"Give it to her, Swanson," said Jernigan cheerfully, although his face was twisted with the pain of his position. Swanson worked furiously, with the water rising about his legs. The other workmen were already safe in the air lock. The dim tunnel seemed like a

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